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ABSTRACT

Austin's 5-year Title VII project was intended to improve the achievement of elementary students in the following areas: oral language proficiency, knowledge of basic concepts, reading ability in Spanish, and proficiency in English reading and math. Results indicated that program participants gained in knowledge of basic concepts at the kindergarten level and, to some extent, in Spanish reading ability. Fifth grade project students showed greater achievement than their nonproject peers in English reading. However, in fifth grade math and fourth grade reading and math, project students and nonproject students did not differ in their rate of gains. The gap in achievement between Spanish-dominant or bilingual students and their English-dominant peers remained. The program raised several problems for consideration: (1) difficulty in locating appropriate instruments for measuring achievement objectives in bilingual programs; (2) difficulty in obtaining an appropriate sample of students; (3) personnel changes in both project staff and evaluation staff during the course of a project; and (4) lack of evaluation models applicable for longitudinal evaluations of achievement in bilingual programs. (CM)

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Evaluation of Achievement Outcomes:

Austin's Experience

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EVALUATION OF ACHIEVEMENT OUTCOMES: AUSTIN'S EXPERIENCE

The Austin Independent School District's five-year Title VII project was concerned with improving achievement of project participants in several major areas: oral language proficiency, knowledge of basic concepts, reading ability in Spanish, and proficiency in English reading and math. This paper will focus on the specific achievement outcomes of Austin's project, and also point out those evaluation issues and problems which evolved for AISD during the project.

Oral Langauge Development

A primary objective of the AISD Title VII program was to provide oral language development in both English and Spanish. Measurement of this objective was conducted using the Oral Language Proficiency Measure (PAL Test) developed by the El Paso Public Schools. Each year, the test was administered in the fall by school personnel to kindergartners with a language other than English spoken in their homes. Spring posttesting for a sample of project and nonproject kindergartners was conducted by trained evaluation staff.

Comparisons of gains made by project and nonproject students were made using a regression approach in which the criterion variable was the spring posttest score on English or Spanish and the predictor variables were the students' project status and pretest scores. In nontechnical terms, project and nonproject students were compared on posttest scores, while adjusting for initial differences between the two groups. Results of these comparisons of project and nonproject students indicated that neither group

showed consistently greater gains in English or Spanish PAL scores, across each of the five years of the project. (Figure 1 illustrates these longitudinal findings.)

Several problems exist with interpreting these findings, of course. The PAL is subjectively scored, as were all oral language measures available for use in primary grades at the conception of this project. In addition, the students were not randomly assigned to project and nonproject control groups, a problem which is present throughout all the achievement findings presented here.

	Year 75-76	Year 76-77	Year 77-78	Year 78-79	Year 79-80
Group With Greatest English PAL Gains	Neither	Project	Neither	Neither	Nonproject
Group With Greatest Spanish PAL Gains	Neither	Project*	Project	Neither	Nonproject

* Resulted from a drop in Spanish PAL scores for nonproject students, since project students actually showed no gains.

Figure 1. COMPARISON OF PROJECT AND NONPROJECT KINDERGARTNERS ON GAINS MADE IN ENGLISH AND SPANISH ON THE PAL, ACROSS FIVE YEARS OF THE TITLE VII PROJECT.

Knowledge of Basic Concepts

A second objective of the Title VII project in the AISD was to improve students' knowledge of the basic concepts which are considered important at the early grade levels. Project and nonproject kindergarten

students were administered the Boehm Test of Basic Concepts in the fall and spring each year. Project students who were Spanish-dominant were tested with the Spanish version of the Boehm, while all others were tested in English. Comparison of project and nonproject students tested in English indicated that for the last three years of the five-year project, *project students gained more than nonproject students.*

Unfortunately, no nonproject students were tested in Spanish and some problems exist in comparing the gains of students tested in Spanish with those of other students. It appears that gains of project students tested in Spanish were comparable to gains of English-tested project students. However, it is unclear whether scores on the Spanish version of the test are equivalent to scores on the English version; in other words, are the tests of equal difficulty? The Spanish version of the Boehm is a direct translation of the English version, but that process of translation does not ensure that the questions are worded in such a way as to be of equivalent difficulty. However, there is obviously a need for instruments to measure achievement in content areas that have equivalent forms in English and Spanish, especially at the lower grade levels.

Improvement in Spanish Reading

Another objective of the AISD Title VII project was to develop reading skills in Spanish for project students. A sample of project and nonproject students in grades 2-5 was tested with the Spanish Reading Test or Prueba de Lectura in the spring of each year. Achievement gains in Spanish reading were then compared for project and nonproject students. The results of these comparisons indicated that *project students showed small, but consistent*

gains in their Spanish reading, and these gains were greater than those of nonproject students.

In interpreting these results, some caution seems needed. Out of a possible 134 points, mean gains for fourth graders after three years of instruction equalled only 12.40 raw score points, while mean gains for fifth graders with three or four years of instruction were 12.10 raw score points. The fifth-grade cohort began second grade with higher scores in Spanish reading than did the fourth grade group. The gain in raw scores for these groups resulted in mean Spanish reading scores for fourth graders that were at only the 12th percentile, while fifth graders were scoring at only the 26th percentile, using national norms. (Texas norms were not available for the form and level of test which was used.)

Achievement in English Reading and Math

A major objective of Austin's Title VII Bilingual Project was to improve the achievement of project students in English reading and math. In an effort to minimize the extra testing involved for the students, this objective was measured using the same test adopted by the District for its annual spring testing efforts--the California Achievement Tests (CAT, 1970).

Although project students across the years showed consistent gains in their Reading and Math Achievement Development Scale Scores on the CAT, perhaps the most interesting comparisons are between longitudinal gains of project and nonproject students. A sample of fifth graders was chosen who had consistently participated or not participated in the Title VII project

since first grade. Comparisons of project and nonproject fifth-grade students indicated that the project students showed significantly greater gains than nonproject students on the CAT in reading, but no significant differences were found in math.

A similar sample of fourth-grade students who were consistently project or nonproject revealed no significant difference in reading or math gains on the CAT.

Another interesting comparison of achievement gains was of groups of project students who differed with respect to language dominance. Upon entry into school, project students were classified on the basis of their PAL scores as English monolingual, English dominant, or Spanish dominant/bilingual. An examination of the achievement test scores for these three language groups at the first grade indicated that means for Spanish-dominant/bilingual students were consistently lower than those of the other two groups. After four or five years of participation in the project, the gap in achievement between the Spanish-dominant/bilingual students and their English-dominant or English monolingual peers is not closing. In fact, at fifth grade the gap was significantly wider than it had been at first grade, with Spanish-dominant/bilingual students falling further behind in both reading and math. (Figures 2-5 graphically depict these results.)

Several factors need to be considered in interpreting these results. There was a high attrition rate among the original samples of students, and it is unclear what impact short-term participation in the project might have had on these students. In addition, the District had a policy until 1979 of exempting special education students from testing with the CAT, and thus the sample of students with valid scores in earlier years of the

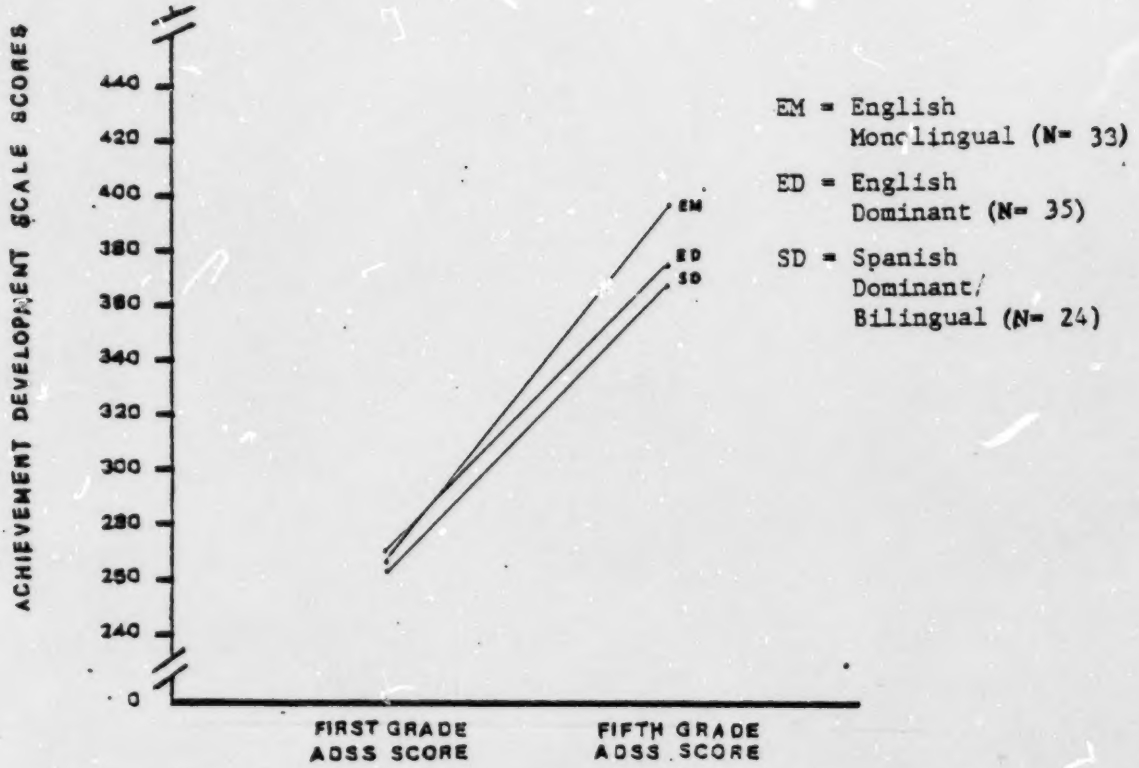

Figure 2. READING ACHIEVEMENT GAINS OF PROJECT STUDENTS ACCORDING TO LANGUAGE DOMINANCE (GRADE 5).

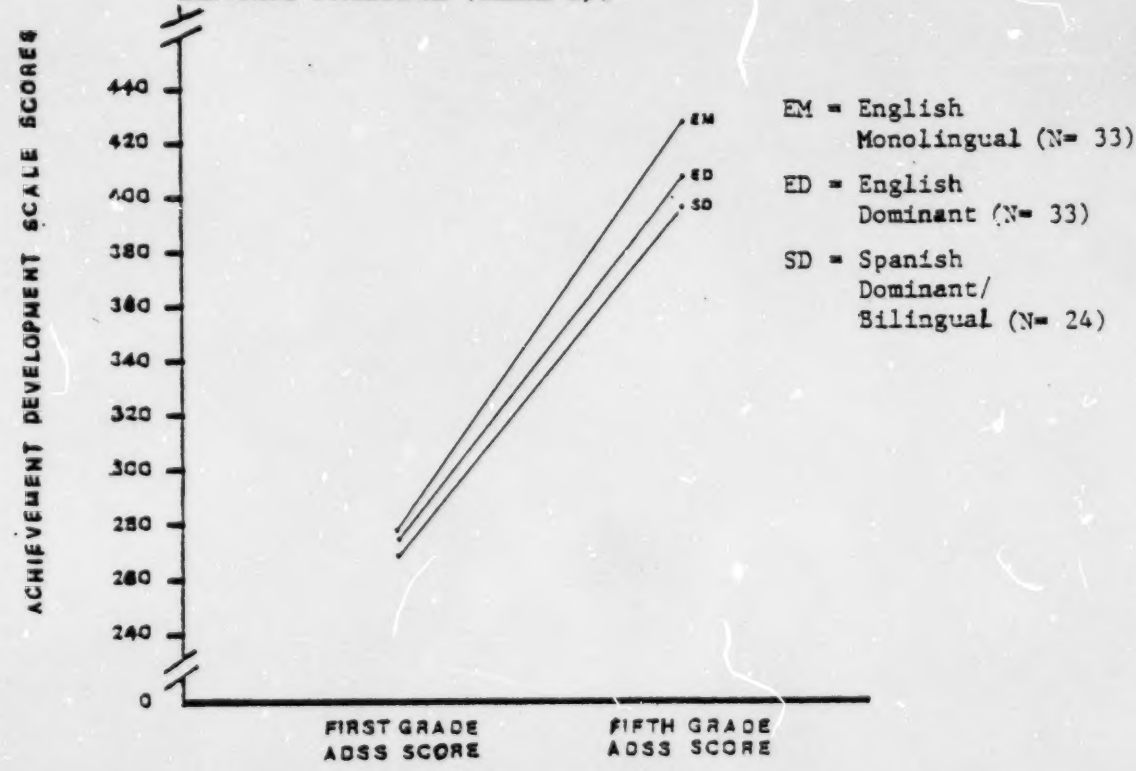

Figure 3. MATH ACHIEVEMENT GAINS OF PROJECT STUDENTS ACCORDING TO LANGUAGE DOMINANCE (GRADE 5).

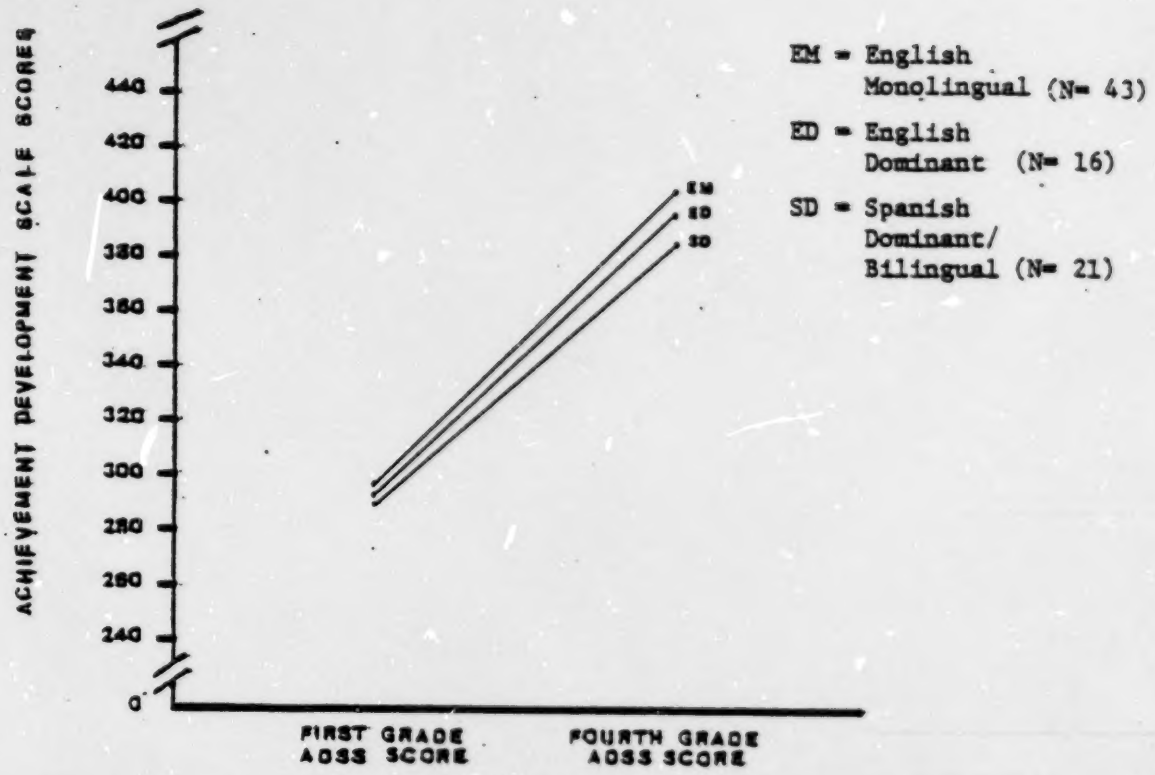

Figure 4. READING ACHIEVEMENT GAINS OF PROJECT STUDENTS ACCORDING TO LANGUAGE DOMINANCE (GRADE 4).

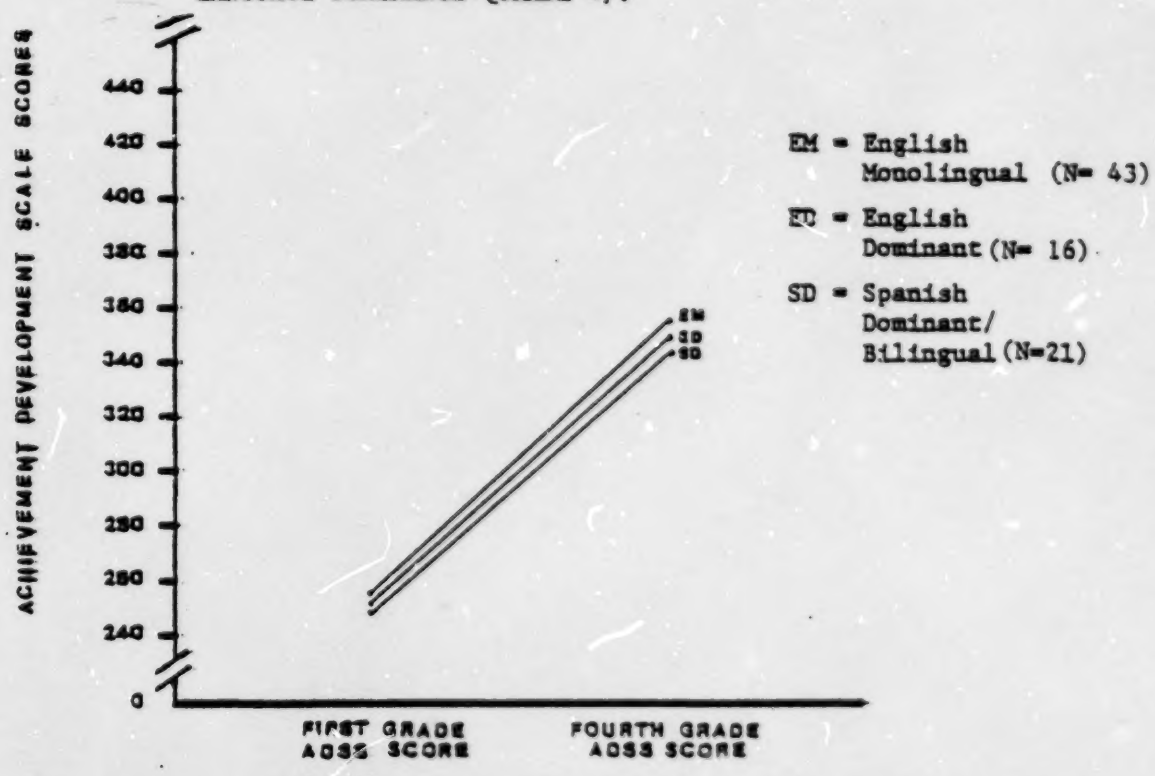

Figure 5. MATH ACHIEVEMENT GAINS OF PROJECT STUDENTS, ACCORDING TO LANGUAGE DOMINANCE (GRADE 4).

project did not reflect the true population of students in the project and nonproject classrooms. This policy may have resulted in distorted estimates of group means.

Arguments by bilingual educators also state that if the CAT is culturally biased in favor on the Anglo student, benefits to project students may have been masked. Finally, learning in content areas may have occurred with the Spanish-dominant/bilingual students that is not reflected in these results.

Summary of Achievement Data

These results indicate that participants in the program received benefits in terms of knowledge of basic concepts at the kindergarten level and also to some extent in Spanish reading ability. In addition, fifth-grade project students outgained their nonproject peers in English reading, although these gains appear to be due to the gains of English-dominant and English-monolingual students. In fifth-grade math and fourth-grade reading and math, project students and nonproject students did not differ in their rate of gains. The gap in achievement between Spanish-dominant or bilingual students and their English-dominant peers does not appear to be closing.

Summary of Evaluation Issues and Considerations

Several major issues arise for further consideration by evaluators of bilingual programs. First, there are serious difficulties in locating appropriate instruments for measuring achievement objectives in bilingual programs. Language instruments are frequently subjective and many instruments measuring content are lacking in truly *equivalent* English/Spanish forms. In addition, potential cultural bias in English achievement tests continues to be a problem.

Second, it is often difficult to obtain an appropriate sample of students, in order to accurately assess the objectives.

Due to nonrandom assignment of students in this and many other programs, "control" groups may be nonexistent or at best, not comparable to the students participating in the project. A related sample issue is that longitudinal gains become very difficult to measure because of the high attrition rate among participants--families migrate, districts move students in desegregation efforts, and schools may elect to drop out of the project, as happened in AISD. In short, in order to control for this attrition, initial samples must be large if longitudinal studies are to be successful.

Another problem concerns personnel changes in both project staff and evaluation staff during the course of a long-term project. Turnover among teachers or administrative staff of the project means that it is difficult to assure that students receive a consistent program. Students within the same project may have different opportunities to learn, and it is not easy to measure such differences. Changes in evaluation staff can result in loss of information about trends, as well as a potential lack of consistency in the way objectives are measured.

Finally, there is a lack of evaluation models applicable for longitudinal evaluations of achievement in bilingual programs. In addition, there are still many questions concerning the best ways to measure change over long periods of time. Development of such models of evaluation and measurement would have the advantage of allowing comparisons between and across programs, as well as more satisfactory evaluation of individual programs.